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FILTER FLARE-UP SURVEY

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ABSTRACT

Results of the 1985 Filter Flare-up Survey are presented along with a historical overview of results from surveys conducted from 1982 through 1984. Customer complaints due to filter flare-up are reviewed for Philip Morris brands.

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## I. OBJECTIVE

The objective of this study was to survey Philip Morris brands and competitive brands for filter flare-up; and to present a historical overview of the results from the 1985 survey along with surveys conducted in 1982-1984.

## II. INTRODUCTION

Filter flare-up surveys were initiated in 1982 following the introduction of B&H Deluxe Ultra Lights and the subsequent number of filter flare-up complaints by customers for this brand. A total of fifty brands were surveyed, followed by surveys in 1983 and 1984 of sixty-three and sixty-four brands, respectively. Due to the introduction of new brands and the interest in value entry/generic brands, the scope of the 1985 filter flare-up survey was expanded over previous surveys.

## III. FILTER FLARE-UP SURVEY - 1985

A total of eighty-four brands were tested for filter flare-up in the 1985 survey. The survey represents brands from the six major manufacturers of cigarettes; brands were obtained by Cigarette Testing as part of the normal CI pick-up. The distribution of brands by supplier is summarized in Table 1.

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TABLE 1  
Flare-Up Survey - 1985

<u>Manufacturer</u>	<u>No. of Brands</u>
R. J. Reynolds	28
Philip Morris	24
Brown & Williamson	12
Lorillard	11
American	6
Liggett Group	3

IV. HISTORICAL OVERVIEW

A. Philip Morris Brands

Seventeen of twenty-four Philip Morris brands tested in 1985 had zero percent flare-up rates. Of those seventeen brands, six brands were new products or line extensions scheduled for test market during 1985 or early 1986. Four new brands which had filter flare-up rates over zero percent were Concord 85mm, nonmenthol/rich setting (1%), Players Lights 85mm, nonmenthol (1%), Cambridge Lights 85mm, nonmenthol (6%), and Cambridge Lights 100mm, nonmenthol (9%). In 1984, eight of the fourteen Philip Morris brands tested had zero percent flare-up. Of these same brands tested in 1985, Merit 85mm and 100mm and Marlboro Lights 85mm had flare-up rates of 2%, 1%, and 9%, respectively. Brands which entered the zero percent flare-up bracket in 1985 were Merit Ultra Lights 85mm (5%, 1984), Marlboro Lights Box (1%, 1984), and Merit Ultra Lights 85mm menthol (2%, 1984).

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The decrease in filter flare-up rates for most Philip Morris brands is a reflection of conversion and qualification of brands from GSR-156 tipping base sheet to Ecusta 30436 base sheet. Marlboro Lights 100mm was fully converted to Ecusta 30436 during the fourth quarter of 1985. Conversion of Marlboro Lights 85mm by all factories is scheduled for completion by the end of the first quarter of 1986. Following the conversion of Marlboro Lights 85mm, efforts will be directed at the conversion of cork-on-white brands (Cambridge Lights 85mm and 100mm - nonmenthol, Merit Ultra Lights 85mm and 100mm - menthol and nonmenthol, and Merit 85mm and 100mm - menthol and nonmenthol). The zero percent flare-up rate seen in the 1985 survey for Merit Ultra Lights 85mm is not representative for a cork-on-white brand in comparison to earlier surveys. The lower rate may be due to tighter quality control of the tipping paper composition by the paper supplier.

TABLE 2  
Historical Overview - Philip Morris Brands

<u>Brand</u>	<u>Tipping Description</u>	<u>% Filter Flare-Up</u>			
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>85mm</u>					
Merit	C/W	1	7	10	2
Merit Ultra Lights	C/W	1	3	5	0
Cambridge	White	1	--	0	0
Parliament Lights	White	0	--	0	0
Marlboro Lights	White	5	0	4	9
Marlboro	Cork	0	0	0	0
Marlboro Lights (Box)	White	--	0	1	0
Merit Ultra Lights, Menthol	C/W	2	3	2	0

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<u>Brand</u>	<u>Tipping Description</u>	<u>% Filter Flare-Up</u>			
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>85mm Continued</u>					
Concord, Nonmenthol	White				
Mild Setting		--	--	--	0
Rich Setting		--	--	--	1
Players Lights	White	--	--	--	1
Player Lights-Menthol	White	--	--	--	0
Cambridge Lights	C/W	--	--	--	6
<u>100mm</u>					
Merit	C/W	1	7	7	1
B&H	White	0	0	0	0
B&H Lights	White	0	0	0	0
B&H Deluxe Ultra Lights	White	6	0	0	0
Marlboro Lights	White	5	5	0	0
Marlboro	Cork	0	0	0	0
Players Lights	White	--	--	--	0
Players Lights Menthol	White	--	--	--	0
Cambridge Lights	C/W	--	--	--	9
<u>120mm</u>					
Virginia Slims	White	--	--	--	0
Virginia Slims Menthol	White	--	--	--	0

B. Competitive Brands

Results from surveys for 1982 through 1985 are presented by manufacturer in Table 3 (R. J. Reynolds), Table 4 (Brown & Williamson), Table 5 (Lorillard), and Table 6 (American and Liggett Group).

In the 1985 survey thirteen of the seventeen brands with filter flare-up rates greater than two percent were competitive brands. Six brands were from Brown & Williamson (Viceroy 85mm and 100mm, Raleigh 85mm and 100mm, Richland 85mm, and Kool 100mm), four brands from R. J. Reynolds (Vantage 85mm and 100mm, Salem Lights 100mm, and Salem Ultra Lights 100mm), two from the Liggett Group (L&M 85mm and 100mm), and one brand from American (Pall Mall 100mm). Lorillard did not have any brands with flare-up rates over two percent; and except for Richland 85mm, which had not been tested previously, all of the mentioned brands had historically high flare-up rates.

TABLE 3  
Historical Overview - R. J. Reynolds

<u>Brand</u>	<u>Tipping Description</u>	<u>% Filter Flare-Up</u>			
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>85mm</u>					
Winston	Cork	0	0	0	0
Winston Lights	C/W	0	0	1	1
Winston Ultra Lights	C/W	0	0	0	0
Vantage	C/W	1	2	0	13
Vantage Ultra Lights	White	3	2	0	0
Camell	C/W	4	1	1	0
Camell Lights	C/W	--	0	1	0
NOW	White	0	0	0	0
Salem	White	2	0	0	0
Salem Lights	White	0	0	0	1
Salem Ultra Lights	White	0	5	4	1
Bright	White	--	4	3	0

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Brand	Tipping Description	% Filter Flare-Up			
		1982	1983	1984	1985
<u>85mm</u>					
Doral	C/W	--	--	--	1
Century	C/W	--	--	--	0
Century Lights	C/W	--	--	--	1
<u>100mm</u>					
Winston	Cork	1	0	0	0
Winston Lights	C/W	1	4	8	1
Winston Ultra Lights	C/W	0	0	0	0
Vantage	C/W	1	13	4	3
Vantage Ultra Lights	White	1	9	3	0
Camel Lights	C/W	2	1	5	0
Salem	White	4	2	0	1
Salem Lights	White	10	12	9	9
Salem Ultra Lights	White	14	22	0	5
NOW	White	--	3	0	0
Doral	C/W	--	--	--	0
Century	C/W	--	--	--	0
Century Lights	C/W	--	--	--	0

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TABLE 4

Historical Overview - Brown & Williamson

<u>Brand</u>	<u>Tipping Description</u>	<u>% Filter Flare-Up</u>			
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>85mm</u>					
Barclay	C/W	0	0	0	0
Viceroy	Cork	0	0	21	35
Raleigh	Cork	--	12	4	16
Kool	Cork	8	19	2	2
Kool Milds	C/W	1	0	1	1
Richland	Cork	--	--	--	6
<u>100mm</u>					
Barclay	C/W	--	1	0	0
Viceroy	Cork	--	0	16	35
Raleigh	Cork	--	24	8	16
Kool	Cork	14	16	--	5
Kool Milds	C/W	--	--	--	1
Belair	White	--	52	33	0

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TABLE 5  
Historical Overview - Lorillard

<u>Brand</u>	<u>Tipping Description</u>	<u>% Filter Flare-Up</u>			
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>85mm</u>					
Triumph	C/W	9	8	2	0
Kent III	White	0	25	0	0
Kent	White	3	5	4	1
Kent Golden Lights	White	0	2	0	0
True	White	1	1	0	0
Old Gold	Cork	--	--	--	0
Newport	Cork	0	0	0	0
Newport Lights	C/W	0	1	3	0
<u>100mm</u>					
Kent III	White	0	24	7	0
Kent	White	4	1	20	0
True	White	--	0	7	0

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TABLE 6

Historical Overview - American and Liggett Group

<u>Brand</u>	<u>Tipping Description</u>	<u>% Filter Flare-Up</u>			
		<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
<u>American 85mm</u>					
Carlton	White	1	2	0	1
Tareyton	Cork	--	2	15	1
Lucky Strike	C/W	--	5	0	1
<u>American 100mm</u>					
Carlton	White	5	8	0	0
Tareyton	Cork	--	0	8	0
Pall Mall	White	0	3	3	5
<u>Liggett 85mm</u>					
L&M	White	--	2	3	10
<u>Liggett 100mm</u>					
L&M	White	--	13	13	4
Lark	C/W	--	4	0	0

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Brands which historically have gone from a flare-up rate greater than two percent to a zero percent flare-up rate are listed in Table 7. R. J. Reynolds and Lorillard have six brands each; American, two brands; and Brown & Williamson and Liggett Group, one each. Seven of these brands achieved zero percent flare-up between 1983 and 1984; eight achieved zero percent flare-up between 1984 and 1985.

TABLE 7  
Historical Overview Of 0% Filter Flare-Up  
Competitive Brands

<u>Time Period</u>	<u>Brand (Manufacturer)</u>
1982 - 1983	Salem 85mm (RJR)
1983 - 1984	Vantage Ultra Lights 85mm (RJR)
	Now 100mm (RJR)
	Kent III 85mm (LOR)
	Kent Golden Lights 85mm (LOR)
	True 100mm (LOR)
	Carlton 100mm (AM)
	Lark 100mm (LG)
1984 - 1985	Bright 85mm (RJR)
	Vantage Ultra Lights 100mm (RJR)
	Camel Lights 100mm (RJR)
	Newport Lights 85mm (LOR)
	Kent III 100mm (LOR)
	Kent 100mm (LOR)
	Tareyton 100mm (AM)
	Belair 100mm (B&W)

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It appears that Lorillard and R. J. Reynolds are aware of filter flare-up and have made changes in their brands accordingly. Brown & Williamson, with the exception of Belair 100mm, does not appear to be responding to filter flare-up. During the time period 1983 to 1984, both Viceroy 85mm and Viceroy 100mm went from zero percent flare-up to flare-up rates ranging from sixteen to thirty-five percent. In 1985, Viceroy 85mm and 100mm, Raleigh 85mm and 100mm, Richland 85mm, and Kool 100mm represented six of seventeen brands with high flare-up rates. All of these brands use cork tipping. The composition of this tipping may be higher in iron oxide or other components which would contribute to larger amounts of acid insoluble ash. It is believed that larger amounts of acid insoluble ash enhance the frequency of filter flare-up via changes in coal porosity. Philip Morris brands use a cork tipping based on calcium carbonate which does not contribute to acid insoluble ash, and filter flare-up has not been a serious problem. Philip Morris formerly used cork tipping formulated with iron oxide but converted to the current formula along with electrostatic perforation.

#### VI. CUSTOMER COMPLAINTS - PHILIP MORRIS

The impact of filter flare-up on customer complaints for Philip Morris brands is shown in Table 8. In 1982 total customer complaints numbered 81.3 per billion sales units (CC/B). Filter flare-up complaints for 1982 were 1.08 per billion sales units (FF/B). By 1985, CC/B had decreased to 51.6 and FF/B had decreased to 0.16. Filter flare-up accounted for customer complaints of 1.33% in 1982 and 0.32% in 1985. Therefore, the

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impact of filter flare-up on total customer complaints has decreased at a greater rate than the decrease in total customer complaints.

TABLE 8  
Customer Complaints  
1982-1983

	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>
CC/B	81.3	75.8	60.3	51.6
FF/B	1.08	0.29	0.16	0.16
%	1.33	0.39	0.26	0.32

Philip Morris brands which had the greatest impact on filter flare-up were primarily B&H Deluxe Ultra Lights, Marlboro Lights, and Merit. As these brands are converted to tipping paper with a reduced flare-up rate the number of filter flare-up complaints should drop still lower.

V. PLANS

A 1986 filter flare-up survey is recommended. This survey should continue to emphasize testing of new brands, value entry brands, generic brands, and those brands which have a historically high rate of filter flare-up.

The qualification and conversion of Philip Morris brands will be continued during 1986-1987, with the strongest emphasis being placed on the cork-on-white brands (Cambridge Lights, Merit, and Merit Ultra Lights).

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